

(TABLE 1) COVER MANAGEMENT CONDITIONS

Select the cover management condition that best describes the condition during the 1/4 of the year when rainfall and runoff are most erosive and the soil is most susceptible to erosion. Since the P factor effects are approximate, no provision is made for varying the cover-management condition class during the year.

Table 1: Description of cropland cover-management conditions used in RUSLE for estimating P-factor values.

COVER-MANAGEMENT CONDITION	DESCRIPTION
Code 1. Established meadow /Pasture (1 x mowed or unmowed pasture)	In this condition, the grass is dense and runoff is very slow (about the slowest under any vegetative condition). When mowed and baled, this condition is condition 2.
Code 2. 1 st year meadow, hay. (Mowed 2X or more – harvested)	In this condition, the hay is a mixture of grass and legume just before cutting. The meadow is a good stand of grass harvested] that is nearing the end of the first year. When mowed and baled, this condition becomes a condition 4 for a short time.
Code 3. Heavy cover and/or very rough. (No-till into high residue crops <u>or</u> rough chisel/subsoiled)	Ground cover for this condition is about 75 to 95%. Roughness would be like that left by a high clearance moldboard plow on a heavy textured soil. Roughness .depressions would have the appearance of being 7 inches deep and deeper. Vegetative hydraulic roughness would be like that from a good legume forage crop, such as alfalfa, that has not been mowed.
Code 4. Moderate cover and/or rough. (No-till into small grain stubble or baled stover or high residue mulch-till)	The ground cover for this condition is about 40 to 65%. This rough.hness would be like that left by a moldboard plow in a medium textured soil. Depressions would have the appearance of being about 4 to 6 inches deep. Vegetative hydraulic roughness would be much like that produced by winter small grain at full maturity.

COVER-MANAGEMENT CONDITION	DESCRIPTION
<p>Code 5. Light cover and/or moderate roughness. (Mulch till or winter wheat or spring seeded small grains (drill) oats-wheat in rotation)</p>	<p>Ground surface cover is between 10 to 35% and the surface roughness is like that left by the first pass of a tandem disk over a medium texture soil that has been moldboard plowed. This roughness could also be much like that left after a chisel plow through a medium textured soil at optimum moisture conditions for tillage. Roughness depressions would have the appearance of being on the order of 2 to 3 inches deep. In terms of hydraulic roughness produced by vegetation, this condition is much like that produced by spring small grain at about three fourths maturity.</p>
<p>Code 6. No cover and/or minimal roughness. (Clean tilled crops corn/soybean/small grain)</p>	<p>This condition is very much like the condition typically found roughness in row cropped fields after the field has been planted and exposed to a moderately intense rainfall. Ground cover is less than about 5% and the roughness is that characteristic of a good seedbed for corn or soybeans. The surface is rougher than that of a finely pulverized seedbed for seeding vegetables or grass.</p>
<p>Code 7. Clean-tilled, smooth, fallow. (Vegetables/alfalfa/grass)</p>	<p>This condition is essentially bare, with a cover of 5% or less. The soil has not had a crop grown on it in the last 6 months or more. Much of the residual effects of previous cropping has disappeared. The surface is smooth, much like the surface that develops on a very finely pulverized seedbed exposed to several intense rainfalls. This condition is found in fallowed and vegetable fields, or in newly sown lawns and hay fields.</p>

**TABLE 2: GUIDELINES FOR SELECTING RIDGE HEIGHTS FOR
CONTOURING WITH RUSLE**

Select the ridge height that best describes the condition during the 1/4 of the year when rainfall and runoff are most erosive and the soil is most susceptible to erosion. For dry-farmed cropland of the Northwest Wheat and Range Region, and additional areas where Req is identified as applicable to the winter erosive period, use the ridge height after fall seeding.

RIDGE HEIGHT	CONDITION
1. VERY LOW (0.5- 2 in.) RIDGES	Plants not closely spaced, but with a perceptible ridge height No-till planted row crops; Fields that have been rolled, pressed or dragged after planting; Conventionally drilled crops when erosive rains occur during or soon after planting and clear seeded hay, that leaves a very low ridge.
2. LOW (2- 3 in.) RIDGES	No-till drilled crops; Mulch tilled row crops; Conventionally planted row crops with no row cultivation; Conventionally drilled small grain when erosive rains are uniformly distributed throughout the year; Winter small grain when runoff from snowmelt occurs during winter and early spring; Transplanted crops, widely spaced.
3. MODERATE (3- 4 in.) RIDGES)	Conventionally (clean) tilled row crops with row cultivation; High yielding winter small grain crops when erosive rains are concentrated in the late spring after plants have developed a stiff, upright stem; Transplanted crops that are closely spaced and/or in narrow rows.
4. HIGH (4 - 6 in.) RIDGES	Ridge tilled crops with high (4-6") ridges during periods of erosive rain.
5. VERY HIGH (Greater than 6 in.) RIDGES	Ridge tilled crops with very high (6+") ridges during periods of erosive rains; Hipping, bedding or ridging with very high ridges during periods of erosive rains.

RUSLE TEN-YEAR FREQUENCY SINGLE-STORM EROSION INDEX VALUES FOR NEW YORK

County	(EI)	County	(EI)	County	(EI)
Albany	50	Kings	100	Schenectady	50
Allegany	50	Lewis	50	Schoharie	50
Bronx	100	Livingston	50	Schuyler	50
Broome	50	Madison	50	Seneca	50
Cattaraugus	50	Monroe	50	Steuben	50
Cayuga	50	Montgomery	50	Suffolk	100
Chautauqua	50	Nassau	100	Sullivan	70
Chemung	50	New York	100	Tioga	50
Chenango	50	Niagara	50	Tompkins	50
Clinton	40	Oneida	50	Ulster	70
Columbia	60	Onondaga	50	Warren	50
Cortland	50	Ontario	50	Washington	50
Delaware	60	Orange	80	Wayne	50
Dutchess	60	Orleans	50	Westchester	90
Erie	50	Oswego	50	Wyoming	50
Essex	50	Otsego	50	Yates	50
Franklin	40	Putnam	80		
Fulton	50	Queens	100		
Genesee	50	Rensselaer	50		
Greene	60	Richmond	100		
Hamilton	50	Rockland	90		
Herkimer	50	St. Lawrence	40		
Jefferson	40	Saratoga	50		

HYRDOLOGIC SOIL GROUPS

Runoff Curve Numbers (CN's) ⁴³

DESCRIPTION	HYDROLOGIC SOIL GROUP			
	A	B	C	D
Cultivated – without conservation treatment	72	81	88	91
Cultivated - with conservation treatment	62	71	78	81
Pasture or range – poor condition	68	79	86	89
Pasture or range – good condition	39	61	74	80
Meadow	30	58	71	78
Woods or Forest – thin stand, poor cover, no mulch	45	66	77	83
Woods or Forest – good cover	25	55	70	77
Farmsteads	59	74	82	86
Roads	74	84	90	92

Note: The underlined CN's are below the values in the ES-1026 and ES-1027 charts. Use CN 60 for these conditions unless the job warrants computing the peak discharge by special procedures.

⁴³ From: USDA-NRCS. 1971. Engineering Field Manual – Exhibit 2-2 Runoff Curve Numbers (CN's). EFM Notice-4. May 1971.

ADDITIONAL RUSLE GUIDANCE

RUSLE support tables and figures not contained in this section of the Field Office Technical Guide are listed below. If needed, a copy of this material may be requested from the following address:

Resources Planning Staff Leader
United States Department of Agriculture
Natural Resources Conservation Service
441 South Salina Street, Suite 354
Syracuse, New York 13202-2450

RUSLE SUPPORT TABLES AND FIGURES

1. Table 3 – RUSLE Contour P Subfactors for On-Grade Conditions
2. Table 4 – RUSLE Contouring Subfactor Value Adjusted for Furrow Grade
3. Table 5A – RUSLE Contour Stripcropping Practice (P) Subfactor Table
4. Table 5B – RUSLE Field Stripcropping Practice (P) Subfactor Table
5. Table 5C – RUSLE Buffer Stripcropping Practice (P) Subfactor Table
6. RUSLE Terrace P Factors
7. RUSLE Cover Management Condition Graphs for use with Contouring where R Applies (16 Figures)
8. RUSLE Effective P Subfactor for Contouring (2 Figures)
9. Hydrologic Soil Groups for Soil Series in New York State